

## SEQUENCE LISTING

&lt;110&gt; RNA-LINE OY

&lt;120&gt; Soluble RNA polymerase protein and methods for the use thereof

&lt;130&gt; HY2PCT

&lt;160&gt; 15

&lt;170&gt; PatentIn version 3.1

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&lt;211&gt; 4206

&lt;212&gt; DNA

&lt;213&gt; Neurospora crassa

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| caacgtaccc | tcgaagtccg | gagcgtggct  | tctgaactga | agtcagctgg | tctcaacctc  | 1260 |
| cagctgttac | ctgtcctgga | agatagagcc  | agggacaagg | tgaagatgcg | ccaggcaatc  | 1320 |
| ggtgaccgtc | ttatcaacga | tttgcaacga  | cagttcagcg | agcaaaagca | tgctttgaat  | 1380 |
| cgcccagtg  | aatttcgcca | atgggtttac  | gagagttatt | ccagtcgcgc | aactcgagtc  | 1440 |
| agccacggcc | gtgtgccttt | tcttgctggg  | ctacctgaca | gtcaagagga | gacactgaac  | 1500 |
| ttcttgatga | acagtgggtt | cgatcccaag  | aagcaaaagt | acttgcaaga | catcgccctg  | 1560 |
| gatcttcaaa | agcggaaatg | tgacacgttg  | aagtccaagc | tgaacatccg | tgctgggtcg  | 1620 |
| tcagcataca | tttacatgat | tgccgatttc  | tgggggtgtg | ttgaggaaaa | tgaggttcat  | 1680 |
| gtcggattct | cctcaaagtt | cagagacgag  | gaggagtctt | ttacactcct | atcggactgt  | 1740 |
| gatgtcctcg | tggcgcgatc | cccagcccat  | ttccctagt  | atatccaacg | ggttcgagca  | 1800 |
| gtcttcaagc | cagagctcca | cagtctcaag  | gatgtaatca | tcttctctac | taaaggagat  | 1860 |
| gtaccgcttg | ctaagaagct | atctggtgga  | gactacgacg | gcgatatggc | ctgggtctgc  | 1920 |
| tgggatccgg | agatcgtcga | tggtttcgtc  | aatgcggaaa | tgctctgga  | gcccgcacctg | 1980 |
| tctaggtacc | taaagaagga | caaaacgact  | ttcaaacaac | ttatggcctc | acacggcacg  | 2040 |
| ggctcagcgg | ccaaagagca | gactacatac  | gatatgatcc | agaagagctt | ccatttcgcc  | 2100 |
| ctgcagccca | acttcttggg | catgtgcact  | aactacaaag | aaaggctctg | ttacatcaac  | 2160 |
| aatagtgtgt | ctaacaagcc | ggccatcatt  | cttagttcac | tggtgggaaa | cctcgtcgat  | 2220 |
| cagagcaagc | aaggtattgt | ctttaacgaa  | gcaagctggg | ctcaattgcg | tagggaactg  | 2280 |

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Leu His Glu Ala Pro Leu Ala Val Ala Trp Glu Val Thr Arg Leu Phe  
35 40 45

Met His Cys Lys Val Asp Leu Glu Asp Glu Ser Leu Gly Leu Lys Tyr  
50 55 60

Asp Pro Ser Trp Ser Thr Ala Arg Asp Val Thr Asp Ile Trp Lys Thr  
65 70 75 80

Leu Tyr Arg Leu Asp Ala Phe Arg Gly Lys Pro Phe Pro Glu Lys Pro  
85 90 95

Pro Asn Asp Val Phe Val Thr Ala Met Thr Gly Asn Phe Glu Ser Lys  
 100 105 110

Gly Ser Ala Val Val Leu Ser Ala Val Leu Asp Tyr Asn Pro Asp Asn  
 115 120 125

Ser Pro Thr Ala Pro Leu Tyr Leu Val Lys Leu Lys Pro Leu Met Phe  
 130 135 140

Glu Gln Gly Cys Arg Leu Thr Arg Arg Phe Gly Pro Asp Arg Phe Phe  
 145 150 155 160

Glu Ile Leu Ile Pro Ser Pro Thr Ser Thr Ser Pro Ser Val Pro Pro  
 165 170 175

Val Val Ser Lys Gln Pro Gly Ala Val Glu Glu Val Ile Gln Trp Leu  
 180 185 190

Thr Met Gly Gln His Ser Leu Val Gly Arg Gln Trp Arg Ala Phe Phe  
 195 200 205

Ala Lys Asp Ala Gly Tyr Arg Lys Pro Leu Arg Glu Phe Gln Leu Arg  
 210 215 220

Ala Glu Asp Pro Lys Pro Ile Ile Lys Glu Arg Val His Phe Phe Ala  
 225 230 235 240

Glu Thr Gly Ile Thr Phe Arg Pro Asp Val Phe Lys Thr Arg Ser Val  
 245 250 255

Val Pro Ala Glu Glu Pro Val Glu Gln Arg Thr Glu Phe Lys Val Ser  
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Gln Met Leu Asp Trp Leu Leu Gln Leu Asp Asn Asn Thr Trp Gln Pro  
 275 280 285

His Leu Lys Leu Phe Ser Arg Ile Gln Leu Gly Leu Ser Lys Thr Tyr  
 290 295 300

Ala Ile Met Thr Leu Glu Pro His Gln Ile Arg His His Lys Thr Asp  
 305 310 315 320

Leu Leu Ser Pro Ser Gly Thr Gly Glu Val Met Asn Asp Gly Val Gly  
 325 330 335

Arg Met Ser Arg Ser Val Ala Lys Arg Ile Arg Asp Val Leu Gly Leu

| 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asp | Val | Pro | Ser | Ala | Val | Gln | Gly | Arg | Phe | Gly | Ser | Ala | Lys | Gly |
|     | 355 |     |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |
| Met | Trp | Val | Ile | Asp | Val | Asp | Asp | Thr | Gly | Asp | Glu | Asp | Trp | Ile | Glu |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Thr | Tyr | Pro | Ser | Gln | Arg | Lys | Trp | Glu | Cys | Asp | Phe | Val | Asp | Lys | His |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Gln | Arg | Thr | Leu | Glu | Val | Arg | Ser | Val | Ala | Ser | Glu | Leu | Lys | Ser | Ala |
|     |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Gly | Leu | Asn | Leu | Gln | Leu | Leu | Pro | Val | Leu | Glu | Asp | Arg | Ala | Arg | Asp |
|     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Lys | Val | Lys | Met | Arg | Gln | Ala | Ile | Gly | Asp | Arg | Leu | Ile | Asn | Asp | Leu |
|     | 435 |     |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |
| Gln | Arg | Gln | Phe | Ser | Glu | Gln | Lys | His | Ala | Leu | Asn | Arg | Pro | Val | Glu |
|     | 450 |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |
| Phe | Arg | Gln | Trp | Val | Tyr | Glu | Ser | Tyr | Ser | Ser | Arg | Ala | Thr | Arg | Val |
| 465 |     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Ser | His | Gly | Arg | Val | Pro | Phe | Leu | Ala | Gly | Leu | Pro | Asp | Ser | Gln | Glu |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |
| Glu | Thr | Leu | Asn | Phe | Leu | Met | Asn | Ser | Gly | Phe | Asp | Pro | Lys | Lys | Gln |
|     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |
| Lys | Tyr | Leu | Gln | Asp | Ile | Ala | Trp | Asp | Leu | Gln | Lys | Arg | Lys | Cys | Asp |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |
| Thr | Leu | Lys | Ser | Lys | Leu | Asn | Ile | Arg | Val | Gly | Arg | Ser | Ala | Tyr | Ile |
|     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |
| Tyr | Met | Ile | Ala | Asp | Phe | Trp | Gly | Val | Leu | Glu | Glu | Asn | Glu | Val | His |
| 545 |     |     |     |     | 550 |     |     |     |     | 555 |     |     |     |     | 560 |
| Val | Gly | Phe | Ser | Ser | Lys | Phe | Arg | Asp | Glu | Glu | Glu | Ser | Phe | Thr | Leu |
|     |     |     |     | 565 |     |     |     |     | 570 |     |     |     |     | 575 |     |
| Leu | Ser | Asp | Cys | Asp | Val | Leu | Val | Ala | Arg | Ser | Pro | Ala | His | Phe | Pro |
|     |     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |     |     |

Ser Asp Ile Gln Arg Val Arg Ala Val Phe Lys Pro Glu Leu His Ser  
 595 600 605

Leu Lys Asp Val Ile Ile Phe Ser Thr Lys Gly Asp Val Pro Leu Ala  
 610 615 620

Lys Lys Leu Ser Gly Gly Asp Tyr Asp Gly Asp Met Ala Trp Val Cys  
 625 630 635 640

Trp Asp Pro Glu Ile Val Asp Gly Phe Val Asn Ala Glu Met Pro Leu  
 645 650 655

Glu Pro Asp Leu Ser Arg Tyr Leu Lys Lys Asp Lys Thr Thr Phe Lys  
 660 665 670

Gln Leu Met Ala Ser His Gly Thr Gly Ser Ala Ala Lys Glu Gln Thr  
 675 680 685

Thr Tyr Asp Met Ile Gln Lys Ser Phe His Phe Ala Leu Gln Pro Asn  
 690 695 700

Phe Leu Gly Met Cys Thr Asn Tyr Lys Glu Arg Leu Cys Tyr Ile Asn  
 705 710 715 720

Asn Ser Val Ser Asn Lys Pro Ala Ile Ile Leu Ser Ser Leu Val Gly  
 725 730 735

Asn Leu Val Asp Gln Ser Lys Gln Gly Ile Val Phe Asn Glu Ala Ser  
 740 745 750

Trp Ala Gln Leu Arg Arg Glu Leu Leu Gly Gly Ala Leu Ser Leu Pro  
 755 760 765

Asp Pro Met Tyr Lys Ser Asp Ser Trp Leu Gly Arg Gly Glu Pro Thr  
 770 775 780

His Ile Ile Asp Tyr Leu Lys Phe Ser Ile Ala Arg Pro Ala Ile Asp  
 785 790 795 800

Lys Glu Leu Glu Ala Phe His Asn Ala Met Lys Ala Ala Lys Asp Thr  
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Glu Asp Gly Ala His Phe Trp Asp Pro Asp Leu Ala Ser Tyr Tyr Thr  
 820 825 830

Phe Phe Lys Glu Ile Ser Asp Lys Ser Arg Ser Ser Ala Leu Leu Phe  
           835                                  840                                  845

Thr Thr Leu Lys Asn Arg Ile Gly Glu Val Glu Lys Glu Tyr Gly Arg  
       850                                  855                                  860

Leu Val Lys Asn Lys Glu Met Arg Asp Ser Lys Asp Pro Tyr Pro Val  
       865                                  870                                  875                                  880

Arg Val Asn Gln Val Tyr Glu Lys Trp Cys Ala Ile Thr Pro Glu Ala  
                                   885                                  890                                  895

Met Asp Lys Ser Gly Ala Asn Tyr Asp Ser Lys Val Ile Arg Leu Leu  
                                   900                                  905                                  910

Glu Leu Ser Phe Leu Ala Asp Arg Glu Met Asn Thr Trp Ala Leu Leu  
                                   915                                  920                                  925

Arg Ala Ser Thr Ala Phe Lys Leu Tyr Tyr His Lys Ser Pro Lys Phe  
       930                                  935                                  940

Val Trp Gln Met Ala Gly Arg Gln Leu Ala Tyr Ile Lys Ala Gln Met  
       945                                  950                                  955                                  960

Thr Ser Arg Pro Gly Glu Gly Ala Pro Ala Leu Met Thr Ala Phe Met  
                                   965                                  970                                  975

Tyr Ala Gly Leu Met Pro Asp Lys Lys Phe Thr Lys Gln Tyr Val Ala  
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Arg Leu Glu Gly Asp Gly Ser Glu Tyr Pro Asp Pro Glu Val Tyr Glu  
                                   995                                  1000                                  1005

Val Leu Gly Asp Asp Asp Phe Asp Gly Ile Gly Phe Thr Gly Asn  
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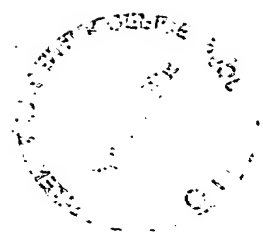
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Glu Phe Cys Arg Tyr Pro Ala Gln Trp Arg Pro Leu Glu Ser Arg Gly  
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Pro Phe Glu Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser  
20 25 30

Thr Arg Thr Gly His His His His His His  
35 40